

**MODERATING EFFECTS OF CROSS-CULTURAL DIMENSIONS ON THE  
RELATIONSHIP BETWEEN PERSUASIVE SMARTPHONE APPLICATION'S  
DESIGN AND ACCEPTANCE-LOYALTY**

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## DEDICATION

This doctoral research project is dedicated to my children Sami and Laith for taking the most precious time from them to earn this degree. You have been the inspiration and hope to go on. I hope you forgive me, and I pray that I will be able to make-up the time I took from you because of this research.

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## ABSTRAK

Mengaplikasikan reka bentuk sistem yang persuasif terhadap budaya yang berbeza telah menjadi tumpuan ramai penyelidik kerana penerimaan penggunaan berpusatkan telefon pintar sebagai salah satu medium komunikasi global melalui aplikasi. Ini disebabkan oleh perkembangan pantas telefon pintar dan penggantungan peribadi pengguna terhadap peranti ini dalam pelbagai budaya. Keadaan ini telah memacu para pereka untuk mencari kaedah yang paling tepat dengan menyasarkan pengguna di kawasan tertentu di dunia. Tujuan utama kajian ini adalah menentukan perkaitan faktor kepelbagaian budaya terhadap teknologi persuasif, penerimaan dan kesetiaan pengguna aplikasi telefon pintar. Keadaan ini dicapai dengan mengkaji kesan faktor pertengahan enam dimensi kepelbagaian budaya yang dibangunkan oleh Hofstede terhadap Reka Bentuk Sistem Persuasif yang dibangunkan oleh Oinas-Kukkonen dan Harjuma (PSD), terhadap penerimaan dan kesetiaan. Melalui penilaian unsur-unsur reka bentuk sistem persuasif dan dimensi kepelbagaian budaya dari perspektif pengguna, terhadap aplikasi yang popular di seluruh dunia seperti WhatsApp; sebuah instrumen telah direka bagi menyiasat penggunaan kepelbagaian budaya dan penggunaan berterusan aplikasi telefon pintar. Melalui instrumen ini, kajian selidik telah dijalankan bagi mengkaji faktor-faktor yang mempengaruhi pengguna dari Malaysia, Belanda, Jerman, dan Kerajaan Arab Saudi untuk menggunakan pakai dan terus menggunakan aplikasi ini setiap hari. Kajian ini, melibatkan responden seramai 488 peserta, dimana dimensi kepelbagaian budaya dan penerimaan serta kesetiaan pengguna telah dikaji bagi mengenalpasti sama ada faktor pertengahan tersebut memberi kesan yang sederhana pada setiap negara. Penemuan kajian menunjukkan persetujuan persepsi pengguna WhatsApp dari empat negara terhadap sebab-sebab untuk mengadaptasi dan menggunakan aplikasi WhatsApp secara berterusan, iaitu: pengaruh sosial (93.7 peratus), kebolehpercayaan (83.4 peratus), sokongan dialog melalui maklum balas (76.4 peratus), kemudahan penggunaan (90.5 peratus) dan kos yang kecil (87.7 peratus). Dapatan kajian juga menunjukkan perspektif baru bahawa jurang antara kepelbagaian budaya semakin kecil terhadap penerimaan dan kesetiaan pengguna. Strategi reka bentuk yang persuasif amat relevan dengan budaya di seluruh dunia. Kesimpulannya, kajian ini dapat membantu komuniti penyelidikan akan datang dalam usaha menceburkan diri dalam meningkatkan rangka kerja reka bentuk yang persuasif untuk aplikasi telefon pintar.

## ABSTRACT

Applying persuasive system design to different cultures has been a focus of many researchers as the global medium of communication has been centered within Smartphone via applications (apps). This is due to the vast proliferation of the Smartphone and the personal attachment of users to this device in various cultures. This led designers to search for ultimate ways to target users in specific regions of the world. The basic purpose of this study was to determine the relevance of cross-cultural factors to persuasive technologies, and the acceptance and loyalty of Smartphone apps. This was achieved by examining the moderating effects of Hofstede's six cross-cultural dimensions on the relationship between Oinas-Kukkonen and Harjumaa's Persuasive System Design (PSD), and acceptance and loyalty. By evaluating elements of persuasive systems design and cross-cultural dimensions, from user's perspective, against a globally popular application like WhatsApp, an instrument was devised to investigate the cross-cultural adoption and continued use of Smartphone apps. Using this instrument, surveys were conducted for this research study to identify the influencing factors that have motivated the users from Malaysia, Netherlands, Germany, and the Kingdom of Saudi Arabia to adopt and continue using this application on a daily basis. These surveys, which included responses from 488 participants, further investigated if there is one cross-cultural dimension that has more moderating effects per country. The findings indicate an agreement among WhatsApp users from all four countries about their reasons for adopting and using this app, namely: social influence (93.7 percent), reliability (83.4 percent), dialog-support via feedback (76.4 percent), ease of use (90.5 percent) and small cost (87.7 percent). The results put new perspective that the gap among cultures is narrowing. Persuasive design strategies are particularly relevant to cultures across the globe. This study can aid the research community in investing efforts into enhancing the persuasive design framework for Smartphone apps.

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